

Search Strategy
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Process for preparing chiral glycidyl derivatives by using phosphate with reduce cost and improved yield.

Kim, Ho Cheol; Kim, Seong Jin; Lee, Ho Seong; Yoon, Jin Won (Rstech Co., Ltd., S. Korea). Repub. Korean Kongkae Taeho Kongbo KR 2004097443 A 18 Nov 2004, No pp. given (Korean). (Korea, Republic Of). CODEN: KRXXA7. CLASS: ICM: C07D303-12. APPLICATION: KR 2003-29740 12 May 2003. DOCUMENT TYPE: Patent CA Section: 27 (Heterocyclic Compounds (One Hetero Atom))

A process is provided for prepg. chiral glycidyl derivs., thereby reducing the cost for prepn. by using phosphate, and improving the prepn. yield, optical purity and chem. purity, so that various chems. such as chiral glycidyl sulfonate and chiral glycidyl alkanoate can be prepd. The process for prepg. chiral glycidyl derivs. of formula 1 comprises the steps of: reacting chiral 3-chloro-1,2-propanediol with phosphate in org. solvent to prep. chiral glycidol in a vessel; and derivatization of chiral glycidol with acyl halide, acid anhydride or sulfonyl halide in the presence of tertiary amine as a base in the same vessel, wherein R is acyl, alkylsulfonyl or arylsulfonyl; X is leaving group, and halogen, alkylcarboxyl or arylcarboxyl; the org. solvent is selected from halogenized alkane, toluene and benzene; and the tertiary amine is trialkylamine or dialkylaminopyridine.

Keywords

glycidyl deriv chiral prepn
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prepn. of chiral glycine derivs. from chiral 3-chloro-1,2-propanediol using phosphate

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NOVELTY - A process for preparing chiral glycidyl derivatives is provided, thereby reducing the cost for preparation by using phosphate, and improving the preparation yield, optical purity and chemical purity, so that various chemicals such as chiral glycidyl sulfonate and chiral glycidyl alkanoate can be prepared.

DETAILED DESCRIPTION - The process for preparing chiral glycidyl derivatives of formula (1) comprises the steps of: reacting chiral 3-chloro-1,2-propanediol with phosphate in organic solvent to prepare chiral glycidol in a vessel; and derivatization of chiral glycidol with acyl halide, acid anhydride or sulfonyl halide in the presence of tertiary amine as a base in the same vessel, wherein R is acyl, alkylsulfonyl or arylsulfonyl; X is leaving group, and halogen, alkylcarboxyl or arylcarboxyl; the organic solvent is selected from halogenized alkane, toluene and benzene; and the tertiary amine is trialkylamine or dialkylaminopyridine.

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